# The impact of pre-eclampsia for mothers and infants: analysis of outcomes from the PREDICT study.

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Objectives: Pre-eclampsia (PET) remains a leading cause of maternal and fetal morbidity and mortality. This study examines the impact of PET among women and their infants recruited to the PREDICT study (prediction of PET in high-risk women).

Methods: Analysis was performed among women recruited to PREDICT (n=232). Outcomes were collected following delivery in a tertiary centre in Northern Ireland. Maternal outcomes included: length of stay for delivery admission, admission to ICU or HDU and delivery by caesarean section. Neonatal outcomes included: timing of delivery, length of stay, admission to ICU, birthweight and GROW centile. Statistical analysis was performed in SPSS using Chi-Squared, one-way ANOVA and Mann-Whitney U tests where appropriate.

Results: Outcomes were studied in 225 women. The rate of PET was 12% (n=26), stillbirth rate was 0.9% (n=2) and miscarriage rate was 2.6% (n=6). Median (IQR) length of stay for women with PET was twice as long (3(2-4) *v* 7(4-12) days, P<0.001). These women were more likely to require admission to HDU (15% *v* 3%, OR 5.8, 95% CI 1.5-2.2, P=0.004) and delivery by caesarean section (58% *v* 36%, OR 2.4, CI 1.0-5.5, P=0.03).

Gestational age at delivery was lower in women with PET (median 36 weeks, IQR 34.9-38.2, P<0.001). Delivery <37 weeks gestation was four times as likely in women with PET (50% *v* 13%, OR 6.7, CI 2.8-15.9, P<0.001). Median (IQR) length of neonatal stay was three times longer in neonates whose mothers had PET (6.5(3-11) *v* 2(2-3) days, P<0.001) and they were more likely to require admission to NICU (27% *v* 11%, OR 3.3, CI 1.2-8.9, P<0.001). There was a reduction in mean birthweight (SD) and mean GROW centile (SD) in infants born of mothers with PET; 2640(865) *v* 3417(590)g, P=0.01 and 31$^{st}$(32) *v* 51$^{st}$(30) centile, P=0.002.

Conclusions: Development of PET has significant implications for mothers and infants in addition to impact on healthcare services. Further healthcare economic analysis is required to assess the burden of cost for the National Health Service.